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(54) Data storage device having a phase change memory medium reversible by direct overwrite and method of direct overwrite.

(57) A method and apparatus for direct, single beam, overwrite of new data over existing data in a phase change optical data storage device; wherein memory cell material is heated and cooled at different rates so that it crystallizes or vitrifies depending upon the temperature to which adjacent heat sink material has been heated at the same time.

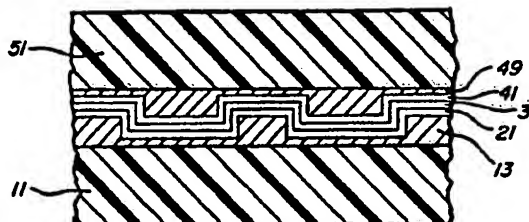


FIG. 2

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	PATENT ABSTRACTS OF JAPAN vol. 8, no. 105 (P-274) 17 May 1984, & JP-A-59 015940 (KONISHIROKU SHASHIN KOGYO K.K.) 27 January 1984, * the whole document *	5, 6	G11B9/00 G11B11/00 G11B7/00 G11B7/24
A	---	4	
A	EP-A-0158804 (HITACHI LTD.) * page 18, lines 3 - 22 * * page 7, lines 9 - 14 *	1-5	
A	---		
A	EP-A-0186329 (HITACHI LTD.) * page 4, lines 5 - 10 * * page 19, line 24 - page 20, line 10 *	1, 5	
A	---		
A	EP-A-0205039 (ENERGY CONVERSION DEVICES) * column 5, line 43 - column 6, line 8; claim 1; figure 1 *	1, 3, 5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			G11B
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 15 NOVEMBER 1989	Examiner GERARD E.A.S.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			